

Remarks

This amendment is responsive to the Office communication mailed October 11, 2005. Page and paragraph references are to that communication unless otherwise indicated.

Claim 1 has been amended to reverse the changes made in the previous two amendments, in which recitations from claims 4 and 14 were added. Claims 4 and 14 have been reinstated as new claims 31 and 32.

In addition, claim 1 has been amended to recite that the step of transforming the data stream is performed in such a way as to enable utilizing a maximum transmission rate characteristic for each of the channels, as previously recited in claim 2, which has been cancelled. Besides being found in original claim 2, support for these recitations may be found in the specification at page 3, lines 6-8; page 8, lines 5-7 and 22-24; and page 11, lines 22-23.

New claim 33, dependent on claim 1, recites that the step of transforming the data stream is performed in such a way as to fully utilize the bandwidth of the transmission facility, even if not required by the data stream. This finds support in the specification at page 11, lines 24-26.¹

Device claim 19 has been amended in a manner similar to that of method claim 1. Thus, claim 19 now recites that the bus channel control transforms the data stream in such a way as to enable utilizing a maximum transmission rate characteristic for each of the channels. Similarly, new claim 34, dependent on claim 19, recites that the bus channel control transforms the data stream in such a way as to fully utilize the transmission facility bandwidth, even if not required by the data stream.

Finally, program product claim 18 has been rewritten as an independent claim, corresponding to claim 1 as amended. No substantive change is intended here other than those changes carried over from claim 1.

¹ "Hence, if there is data to be transmitted the bandwidth of the overall transmission facility is fully utilized, regardless if lower transport capacity is required by the respective data stream to be transmitted."

As amended, claims 1, 18 and 19 and the claims dependent thereon are believed to distinguish patentably over the art cited by the Examiner, especially Long et al. 6,728,238 ("Long"), considered either alone or in conjunction with O'Neal et al. 4,156,796 ("O'Neal"). In rejecting claim 2, which previously contained this recitation, the Examiner pointed (at page 3) to Fig. 9 of Long, as well as to the paragraph at column 14, lines 26-50. However, Fig. 9 merely describes allocating a number of 64-kb/s channels by the COTC main computer "as determined by its configuration database" (step 576), while the passage at column 14 is similarly uninformative.

The Examiner has also cited against claim 2 this passage at column 4, lines 15-31, of O'Neal:

Another aspect of the subsystem of the invention is a feature which provides an adaptive priority allocation based on the transmission rate of a given communications line. This feature allows high speed lines to be accepted for service more frequently and reduces the probability of high speed lines being overrun due to servicing of lower speed lines. Both of these advantages are achieved by a scan table storage element and circuitry which prevents further scanning of lines requiring service if a line has been found which requires service. The priority of the line is dynamically assigned by placing its address in the appropriate relative position of the scan table. In addition, high speed line addresses may be placed in the scan table a plurality of times, thereby increasing the polling frequency for service requests.

This passage, however, relates primarily to prioritizing channels among competing data streams. It does not relate to the transformation of a data stream to permit concurrent transmission across a plurality of channels, as performed by applicants. Accordingly, claims 1, 18 and 19 and the claims dependent thereon are believed to distinguish patentably over the art cited by the Examiner.

Claims 33 and 34 are further believed to distinguish patentably over the art cited by the Examiner by virtue of their recitation that the data stream is transformed in such a way as to fully utilize the bandwidth of the transmission facility, even if not required by the data stream. As noted in the specification (page 11, line 26, to page 12, line 2), this principle allows one to utilize the provided bandwidth of a bus or network very efficiently, leads to a higher statistical availability of data transport capacity at a given time, and, depending on the targeted application, allows one to use a lower-bandwidth facility.

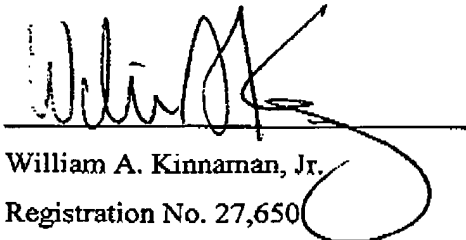
Conclusion

For the foregoing reasons, claims 1, 18 and 19 as amended and the claims dependent thereon are believed to distinguish patentably over the art cited by the Examiner.

Reconsideration of the application as amended is respectfully requested. It is hoped that upon the Examiner will hold all claims allowable and pass the case to issue at an early date. Such action is earnestly solicited.

Respectfully submitted,
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